

*Handwritten signature*

**TRANSMITTAL LETTER**

In re Application of:  
Philip A. Ropp et al.

Serial No.: 10/561,985 ✓

Int'l Application No.: PCT/US2004/018992  
Int'l Filing Date: June 15, 2004

For: REMOVAL OF LIPOPOLYSACCHARIDES  
FROM PROTEIN-LIPOPOLYSACCHARIDE  
COMPLEXES BY NONFLAMMABLE SOLVENTS:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Docket: 2003.795US

Group Art Unit:

Examiner:

**CERTIFICATE OF MAILING**

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as First-Class mail in an envelope addressed to:  
Commissioner for Patents,  
P.O. Box 1450  
Alexandria, VA 22313-1450

on January 11, 2006

*Christina Cangelosi*  
Christina Cangelosi

Sir:

☒ Transmitted herewith find the document(s) related to this application.

TRANSMITTAL LETTER IN DUPLICATE; INFORMATION DISCLOSURE STATEMENT;  
DOCUMENTS (19); CERTIFICATE OF MAILING; AND POST CARD.

☐ Applicant hereby petitions for an extension of time under 37 CFR 1.136 of:

☐ One Month (\$120.00)

☐ Two Months (\$450.00)

☐ Three Months (\$1020.00)

☐ Four Months (\$1590.00)

The total fee believed due is \$ 0.00. Please charge this amount and any other fees,  
which may be due (including filing fees under 37 CFR 1.16 and processing fees under 37  
CFR 1.17) to Deposit Account No. 01-1350. If an extension of time is required but has not  
been requested above, Applicant hereby petitions for an extension of time sufficient for the  
attached document(s) to be timely. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

*F. Aaron Dubberley*

F. Aaron Dubberley  
Attorney for Applicant(s)  
Reg. No. 41,001

Akzo Nobel Inc.  
Intellectual Property Dept.  
7 Livingstone Avenue  
Dobbs Ferry, NY 10522-3408  
Tel No.: (973) 325-4542



## PATENT

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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*Christina Cangelosi*  
Christina Cangelosi

### INFORMATION DISCLOSURE STATEMENT

Sir:

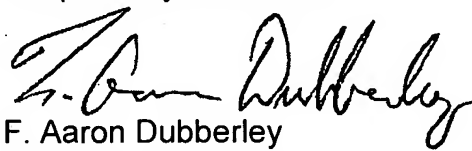
In accordance with the requirements of 37 CFR §1.56, applicants submit the documents attached hereto. Pursuant to the United States Patent and Trademark Office, OG Notice 05 August 2003, applicants have excluded copies of the four (4) U.S. patent documents. All documents are to be made of record in the above-identified case. A listing of said documents on form PTO-1449 is also attached.

The present Information Disclosure Statement is being filed within three months of entrance into the U.S. National stage; therefore, no filing fee is believed to be required. If a filing fee is required, the Commissioner is hereby authorized to charge applicants' deposit account 01-1350 for the full amount of said fee.

This statement is not intended to represent that no better art exists. Applicants reserve the right to contest the applicability of the documents attached hereto as prior art in the event that any information is discovered which demonstrates that said documents do not qualify as prior art.

Consideration of the present Information Disclosure Statement is respectfully requested. The claimed invention is, however, deemed to represent a patentable departure from the teachings of the prior art.

Respectfully submitted,

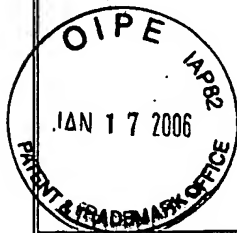
A handwritten signature in black ink, appearing to read "F. Aaron Dubberley". The signature is fluid and cursive, with the first name "F. Aaron" written in a smaller, more compact script than the last name "Dubberley", which is larger and more prominent.

F. Aaron Dubberley  
Attorney for Applicant(s)  
Reg. No. 41,001

Akzo Nobel Inc.  
Intellectual Property Dept.  
7 Livingstone Avenue  
Dobbs Ferry, NY 10522-3408  
Tel No.: (973) 325-4542

**INFORMATION DISCLOSURE CITATION**  
(Use several sheets if necessary)

PTO-1449 (modified)



Atty. Docket #

2003.795 US

Serial No.

10/561,985

Applicant

Philip A. Ropp et al.

Int'l Filing Date

June 15, 2004

Group Art Unit

**U.S. PATENT DOCUMENTS**

Init	Document No.	Issue Date	Name	Class	Subclass	Filing Date
	4,832,751	5/23/1989	Domelsmith et al.	134	28	
	4,248,862	2/3/1981	Ellwood et al.	424	92	
	5,045,456	9/3/1991	Rienstra et al.	435	101	
	6,265,542 B1	7/24/2001	Fahrner et al.	530	344	

**FOREIGN PATENT DOCUMENTS**

	Document No.	Publ. Date	Country	Class	Subclass	Translation	
						Y	N
	EP 0 407 037 A1	1/9/1991	European	A61K	39/02		
	WO 99/63076	12/9/1999	PCT	C12N	15/10		
	WO 02/074791 A1	9/26/2002	PCT	C07K	1/20		

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)**

International Search Report, No.: PCT/US2004/018992, 28 December 2004
Franken et al., "Purification of His-Tagged Proteins by Immobilized Chelate Affinity Chromatography: The Benefits from the Use of Organic Solvent," Protein Expression and Purification, vol. 18, pages 95-99 (2000)
Petsch et al., "Endotoxin Removal From Protein Solutions," Journal of Biotechnology, vol. 76, no. 2-3, pages 97-119 (2000)
Bischoff et al., "Purification and Biochemical Characterization of Recombinant X-1 Antitrypsin Variants Expressed in Escherichia coli," Biochemistry, American Chemical Society, vol. 30, no. 14, pages 3464-3472 (April 9, 1991)
Gagnon et al., "Method for obtaining unique selectivities in ion-exchange chromatography by addition of organic polymers to the mobile phase," Journal of Chromatography A, vol. 743, pages 51-55 (1996)
Heine et al., "The Biology Of Endotoxin", Mol. Biotechnol. 19, pages 279-296 (2001)
Berger et al., "Evidence for endotoxin binding capacity of human Gc-globulin and transferring," Clin. Chim. Acta 163, pages 289-299 (1987)
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Mielniczuk et al., "Gas chromatography-mass spectrometry of lipopolysaccharide 3-hydroxy fatty acids: comparison of pentafluorobenzoyl and trimethylsilyl methyl ester derivatives," Journal Chromatogr. 623, pages 115-122 (1992)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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**FOREIGN PATENT DOCUMENTS**

	Document No.	Publ. Date	Country	Class	Subclass	Translation	
						Y	N

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)**

	Milby et al., "Ion-exchange chromatography of proteins. The effect of neutral polymers in the mobile phase," Journal Chromatogr. A 482, pages 133-144 (1989)
	Tauc et al., "Ion-exchange chromatography of proteins: modulation of selectivity by addition of organic solvents to mobile phase. Application to single-step purification of a proteinase inhibitor from corn and study of the mechanism of selectivity modulation," J. Chromatogr. A 825, pages 17-27 (1998)
	Wilson et al., "Removal of tightly bound endotoxins from biological products," Journal Biotechnol. 88, pages 67-75 (2001)
	Yu et al., "Catalytic properties of lipopolysaccharide (LPS) binding protein: Transfer of LPS to soluble CD14," Journal Biological Chemistry, Vol. 271; No. 8; pages 4100-4105 (1996)
	Dziarski, R. "Cell-bound albumin is the 70-kDa peptidoglycan-, lipopolysaccharide-, and lipoteichoic acid-binding protein on lymphocytes and macrophages," Journal Biological Chemistry, Vol. 269, No.32, pages 20431-20436 (1994)
	Appelmek et al., "Lactoferrin is a lipid A-binding protein," Infection and Immunity, Vol. 62, No. 6, pages 2628-2632 (June 1994)

**EXAMINER****DATE CONSIDERED**

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